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ABSTRACT

This guide addresses the most common considerations when building school facilities in Kentucky. Included are the regulations for the Capital Construction Process, the Kentucky Department of Education's Project Review Process, and a suggested document filing system. Additionally, it features common questions and answers regarding the Kentucky Facility Programming and Construction Criteria Planning Guide. Appendices provide a variety of school design and construction information accumulated from school construction projects, a plan review checklist for school building projects, and forms for developing requests for proposals and project account summary sheets. (GR)

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Guidelines of Best Practices for School Building Projects

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Introduction

Introduction

Each day the Construction Branch of the Division of Facilities Management, receives numerous inquiries regarding the regulations related to school facility construction, or the solutions to a variety of facility problems. The staff has made note of some of the most common questions in order to document as many of the answers as possible.

The ***Guidelines of Best Practices for School Building Projects*** is intended to be a handy reference for school district administrators and the design professionals involved in school facility projects. The information contained in this document does not uniformly apply to each and every project, but is meant to highlight some important considerations. Each individual project may require an entirely different approach from the last.

The *Best Practice Bulletins* section in the Appendix is included to collect periodic communications of new information on topics of immediate interest. We would suggest that a 3-ring binder is the appropriate container for the Guidelines, so that new material may be added when it is available. We intend to up-date holders of the ***Guidelines*** via our mailing list.

It is our hope that these efforts provide useful information and assistance, and reinforce our role as a school district support service. For further discussions of all facility issues, please contact our office at (502) 564-4326.

Division of Facility Management
Mark W. Ryles, Director

Construction Branch
Louis Hugg, Manager
L. Russell McFarland, Consultant

May 1995

Chapter One - Initiating a Building Project

Initiating a Building Project

The precise sequence of the following activities or events may vary (or not occur at all) for each particular project. Prepare and submit a **BG-1 Project Application** in accordance with the provisions of 702 KAR 4:160.

Identifying the Project Type

Which of the following project types best describes this project?

- Facility plan-**priority** project per 702 KAR 1:001?
- Facility plan-**discretionary** project?
- **Minor** project, not on the facility plan?
- **Emergency** project per 702 KAR 4:160?

Determining the Maximum Project Budget

The submittal of a BG-1 Project Application requires a **project budget** to be estimated. There are two basic sources for estimating this cost:

1) If the project is listed on the facility plan, cost estimates from the facility survey may be used. Verify that these figures are current. If not, update the estimates based on inflation.
2) Use estimated costs provided by the design consultants based on the **scope of work**.

A combination of these two sources is generally used. Each method involves an estimate, but accuracy is important in order to stay within the **maximum 10%** variation throughout the life of the project. Add financing costs obtained from the fiscal agent and a minimum **5% contingency**.

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Chapter One - Initiating a Building Project

Determining the Method of Project Financing

Identification of the method of project financing should involve the **fiscal agent**. Consultation with the Division of Finance may also be necessary. Each project may be funded with one or more of the following sources:

- KSFCC (per KRS 157.611);
- SEEK building fund:
  Capital outlay (per KRS 157.420):
- FSPK (per KRS 157.440(1)(b));
- Growth district levy (per KRS 157.621);
- Building funds (per KRS 160.476, 477);
- General fund; and/or
- Donations (i.e., booster club).

Hiring the Design Consultant(s)

702 KAR 4:160 requires school districts to utilize the **Request for Proposal (RFP)** process detailed in Sections 4 and 5 of that administrative regulation, when hiring architects or construction managers. This process shall be initiated when hiring architects for each project exceeding $500,000, and when hiring construction managers for each project exceeding $1,000,000. Involve the design consultants in the project as early as possible.

A sample **Firm Interview Score Sheet** is included in the Appendix for use when interviewing architects, engineers or construction management firms for project services.

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Chapter One - Initiating a Building Project

Selecting and Acquiring a Site

- Determination of the location of the site must follow the criteria established in the district's facility plan.
- The site selection process shall be completed according to the provisions of 702 KAR 4:050.

Programming the Facility

When the project is a new building or an addition/renovation listed on the district's **Facility Plan**, programming should begin with the requirements identified by the **Local Planning Committee (LPC)** on the plan.

A **building planning committee** should be organized with members from the following groups:

- Parents and business leaders;
- Teachers, administrators, maintenance staff; and
- Design professionals.

Discussion of curriculum/service considerations should be conducted by the committee. These topics should include, but are not limited to:

- Basic instructional program needs;
- Enrichment programs;
- Physical education;
- Food service;
- Maintenance/repair requirements; and
- Special features or needs.

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Chapter One - Initiating a Building Project

Program needs may generate some of the spatial/physical characteristics of facility, such as:

- Type of building (one or two story);
- Campus or single building style; or
- Relocatable or permanent structure.

The building planning committee should provide a written **Educational Specification** for submittal to KDE and for use by the design consultants. This specification shall summarize the conclusions (based on the considerations outlined above) of the building planning committee regarding the building requirements. In addition to a calculation of the total net areas required for all building spaces, this document should list the building features needed to support the specific curriculum for the various instructional spaces and present a clear statement of the committee's expectation of the building performance. An effort should be made to prioritize these expectations to facilitate the consideration of alternatives if questions of cost or practicality arise during the design phase.

Determining the Construction Process

The particulars of schedule, funding or past experience may determine which of the following methods of project-delivery is utilized:

- **General contracting** - One contract yields single-source responsibility;
- **Construction management** - Multiple Owner-contractor agreements with the construction manager as the agent of the Owner.
- Work performed by district personnel; or
- Volunteer work (i.e., booster donated).

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Chapter One - Initiating a Building Project

The Building Envelope

While the minimum standards for instructional spaces may be found in 702 KAR 4:170, the building planning committee may be asked to make decisions related to:

- Roof systems;
- Windows;
- Doors;
- Exterior finishes; and/or
- Energy conservation programs.

Interior Requirements

Also within the responsibilities of the building planning committee's may be the discussion and selection of some of the following:

- Surface finishes (walls, floors, etc.);
- Lighting;
- Heating, ventilating and air conditioning;
- Special plumbing;
- Technology; and
- Special equipment or requirements for specific spaces.

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Chapter Two - 702 KAR 4:160 Capital Construction Process

702 KAR 4:160 Capital Construction Process

To clarify and improve the school facility construction process, the State Board of Education adopted 702 KAR 4:160 Capital Construction Process. Implemented in May 1994, this administrative regulation consolidates 702 KAR 4:010 through 4:040. Review comments were solicited from committees of school superintendents, design professionals and representatives of other state agencies. **This regulation defines the responsibilities of the Local Board, the KDE, the Architect and the CM. It replaces out-dated, or previously non-existent contract document forms, with a unified system based on the industry-standard American Institute of Architects Documents.** Included in the provisions of 702 KAR 4:160 are:

▸ **Greater definition of Local Board's responsibilities**

To assure that boards are aware of the actions taken and the commitments made in the school facility construction process, a **board order is required** with the submittal of:

- BG-1 Applications required on projects: 1) utilizing SEEK capital outlay, FSPK or SFCC funds, special-voted or other building funds under KRS 160.476; and/or 2) for a new building, addition or alteration of an existing building or building system, requiring the services of an architect or engineer;
- Revised financial page of the BG-1;
- Declaration of an Emergency;
- Contract Approval;
- Change Orders greater than $2500; and
- Submittal of the BG-4 and requests for Final Inspections.

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Chapter Two - 702 KAR 4:160 Capital Construction Process

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Board **attorney review** is required for:

- All Contracts;
- Bidding documents for compliance with statutes and regulations (with particular attention to sales and use tax exemptions when purchasing materials direct); and
- Bid Bonds, Performance and Payment Bonds, insurance policies or liens.

Reminder: The local Board is responsible for maintaining the records: board actions; proposals; contracts; correspondence; and financial documents. See ***Chapter Four - Suggested Document Filing System***, for a possible document file organization.

A BG-1 Project Application may be revoked for non-compliance with the provisions of 702 KAR 4:160 Capital Construction Process.

▸ **Adoption of Standard Contract Forms**

- The American Institute of Architects Documents provide:
  A unified system with common legal terminology throughout; industry-standard documents are court-tested.
- The KDE Amendments:
  Customize the AIA documents for school facilities in Kentucky.
- Request for Proposal Process:
  Establishes the parameters for hiring construction management services through the use of requests for proposal and a fee guideline.
  The RFP will contain all the project-specific information needed to complete the contract with the Architect or CM.

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Chapter Two - 702 KAR 4:160 Capital Construction Process

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Requires the district to advertise or select three firms to interview through "request for proposals" (RFP's), on projects greater than $500,000.

These three documents combined make up the contract between a Local Board and an Architect or Construction Manager.

- **KDE project oversight responsibilities**
  - Increase of project oversight through the plan review process.
    (See ***Chapter Three - The KDE Project Review Process***)
  - DFM conducts project and/or change order **audits** each year.
  - Includes the review of plans for construction, alterations or **leases** of fixed equipment (e.g., DFM has been aggressively reviewing contracts and specifications for energy management systems).

- **Penalties for Architect or CM non-performance**
  It's provided that an Architect or CM who is declared guilty of malfeasance or non-performance by the Department, may be placed on a five-year suspension prohibiting the architect or CM from entering into a contract with a Local Board.

- **Bond Sale requirements**
  - The requirement for the submission of bond sale documents, ten days prior to the date of the bond sale; if the submitted documents are not in an approvable form at least five days prior to the scheduled bond sale, then the sale date will be postponed.
  - All bids on school revenue bond sales shall be received in Frankfort.

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Chapter Two - 702 KAR 4:160 Capital Construction Process

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- **Dispute Resolution through Mediation**

  702 KAR 4:160 requires the use of Mediation as an alternate means of dispute resolution prior to court proceedings.

  Mediation: allows the disputing parties to take part in the equitable resolution of the dispute rather than accept a third party decision; it costs much less than litigation; can be used on large or small disputes; is sanctioned by several local courts; provides a speedy settlement compared to litigation.

- **Miscellaneous provisions of 702 KAR 4:160**

  - Fee Guidelines
    - Revised fees for architects (abandoned 1965 fee schedule)
    - Devised a fee schedule for CM's
  - Minimum Professional Liability Insurance Coverage required
    - for Architects and CM's
    - Limits graduated to correspond to size of project
  - The requirement for a monthly summary of payments from the construction account on projects greater than $250,000
  - The requirement for insurance companies writing performance and payment bonds to be approved for federal work
  - The requirement for retainage to be held on both the architect's and the construction manager's contracts
  - The definition of an "Emergency" project
  - The requirement for a "sit-down" review meeting with KDE for the submittal of the BG-1 Form on projects in excess of $250,000
  - The requirement for a minimum twenty-one day advertisement for projects greater than $1,000,000

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Chapter Two - 702 KAR 4:160
Capital Construction Process

- The establishment of minimum coverage for Professional Liability Insurance for architects and their consultants
- The establishment of minimum coverage for Professional Liability Insurance for the construction manager
- The requirement of the completion of a Non-collusion Affidavit by the construction manager

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Chapter Three - The KDE Project Review Process

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The KDE Project Review Process

The implementation of 702 KAR 4:160 requires DFM to provide a clear, standardized submittal and approval process. Refer to and utilize the **Submittal Checklist for School Building Projects** (incorporated into 702 KAR 4:160) enclosed with each BG-1 Project Application approval letter issued by the DFM. The document submittals required for each project will be indicated on the Checklist.

The BG-1 Project Application

- Signatures must be originals and a Board of Education Order describing and authorizing the project must be attached.

- Documents, including schematic plans, should not be submitted (other than the BG-1 Form and Board Order authorizing it) until the BG-1 Form is approved by Kentucky Department of Education and a BG- number or project number is assigned.

- All subsequent communications regarding the project shall have the BG-number affixed. When phoning, have the BG-number ready for prompt action.

- At each design phase, the architect is to advise the owner regarding the projected budget. Should the projected cost exceed the approved BG-1 budget, the architect shall request the owner to increase the budget or scale back the scope of work to come within budget.

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Chapter Three - The KDE Project Review Process

- When the construction contract is awarded, a revised financial page of the BG-1 Form is required. It shall coincide with cumulative construction cost, fees, contingencies, etc., and the projected bond sale amount, as applicable.

Contracts with Architects and Construction Managers

- Submit proposed contract for approval, before being signed by the owner with a copy of board of education order approving terms, conditions, and acceptance of the contract subject to KDE approval.

- Submit executed architect/engineer contract with a certificate of professional liability insurance attached.

- Submit executed construction management contract, with a certificate of professional liability insurance and a performance and payment bond for 100% of contract amount attached.

Educational Specifications - Required for ALL New Schools, Major Renovations and Additions (See ***Chapter One - Initiating a Building Project***.)

Site Selection Process - For Submittal Requirements See (702 KAR 4:050) Attachment

Schematic Design Plans

- Submit floor plans and site plan with a building footprint, parking areas,

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Chapter Three - The KDE Project Review Process

site utilities and roadways. Identify any special design problems.

- All areas are to be identified by function with overall dimensions and "square footage" **area tabulations** of all net program spaces shown on the plan.

- Building efficiency and unassigned space percentages are to be calculated and shown on the plan with the **gross area** amount.

NOTE: The schematic design document submittal shall be presented "in-person" by the design consultant, at a review meeting with the Division of Facilities Management.

Design Development Plans

- Submit floor plans, site plan, sections and elevations and other information.

- Submit completed BG-2 Outline Specification and a BG-3 Statement of Probable Cost. (Mark the BG-3 "design development" and see additional remarks under Final Plans and Specifications submittal.)

- Submit 1/4"=1'-0" layouts of special instructional spaces. These will be forwarded to the appropriate curriculum program consultants by the Division of Facilities Management. Include appropriate engineering information such as the distribution of electrical power or computer outlets, water sources or drains (mark plans in red pen, if desired).

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Chapter Three - The KDE Project Review Process

- Submit **preliminary structural, electrical, mechanical and plumbing plans** and outline specifications. When projects include Kentucky Educational Technology System (KETS) network cabling installation, provide a KETS Building and Wiring Checklist Form. This will be forwarded to the Educational Technology Assistance Center for review. You will be notified when approval is issued.

  NOTE: The design development document submittal shall be presented "in-person" by the design consultant, at a **sit-down review** with the Division of Facilities Management.

Final Plans and Specifications

- Submit all final plans and specifications with the bidding documents. The submission set shall be 100% complete and "contract ready" for release to potential bidders.

  1. Final plans and specifications are considered 100% complete only if they are of sufficient detail and complexity that they may be used:

     (a) To obtain a building permit;
     (b) As instruments in the competitive bidding process;
     (c) By a general contractor or construction manager to build a complete project.

  2. Final plans and specifications shall include all current Kentucky

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Chapter Three - The KDE Project Review Process

Department of Education forms and address all current Kentucky Department of Education regulatory requirements.

3. If final plans and specifications are found not to be complete, as described above, the review shall cease and a re-submittal will be required. Written notification will be sent to the Superintendent. The re-submittal will be logged when it's received at DFM, as if it were a new submittal.

4. Allow a 15 business-day review turn-around time of acceptable contract documents. Upon rejection of submitted documents, a re-submission of requested information will begin a new 15 business-day review period. We will attempt to shorten time as staff is available.

5. Submission of supplemental drawings, specifications, project manuals, or other data, for inclusion with the contract documents after the initial submittal is made, will not be allowed. Any substantial changes made after the initial submittal documents will re-start the review turn-around time period stated above.

- Submit a completed BG-3 Statement of Probable Cost.

1. BG-3 estimates must be within the maximum 10% of BG-1 approved amounts or a revised page 2 of the BG-1 Form must be submitted.

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Chapter Three - The KDE Project Review Process

2. A minimum 5% contingency fund must be included on the BG-3 as part of the total project cost.

- Submit copy of the document transmittal letter to Department of Housing, Buildings and Construction. (Include copies of transmittals to other regulatory agencies in authority.)

- Submit any other required items from Site Selection Process if not previously submitted.

- An itemized written response to all review comments is required before approval is given to advertise for bids.

- A set of final plans and specifications incorporating all review items shall be submitted to replace original plans and specifications submission or appropriate addenda.

- For most projects, Kentucky Department of Education Amendment to AIA A701-1987 Instruction to Bidders shall be modified by deleting Article 10 Public Works Act in its entirety. Confirmation of the applicability of the Prevailing Wage Law may be obtained from the Kentucky Department of Labor.

- **Advertisement for bids shall not occur until written approval has been issued by the Division of Facilities Management.**

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Chapter Three - The KDE Project Review Process

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Proposed Contract Documents

- Submit bid tabulation, low-bidder's form of proposal with bid security, and proposed contract(s) for low-bidder(s). On construction manager projects, submit signed Material Supplier Authorization (per 702 KAR 4:170) and proposed purchase orders.

- Submit board order authorizing contracts with apparent low-bidder.

Executed Contract Documents

- Submit executed construction contract.

- Submit performance and payment bond with Kentucky power of attorney or countersigned by Kentucky resident insurance agent.

- Submit insurance certificate.

- Construction management projects will include executed purchase orders.

Change Orders

- Proposed change orders under $2,500 will be submitted after execution, A copy of the board order authorizing its approval shall be attached.

- Change orders over $2,500 must be accompanied by:

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Chapter Three - The KDE Project Review Process

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1. A copy of the board order approving the change order.

2. Cost breakdown to include labor, material, profit and overhead. (If unit prices are utilized, no cost breakdown is required.)

3. Change order Supplemental Information Form (Kentucky Department of Education, current version) signed by the owner.

- Proposed change order, when submitted will be signed by architect, contractor, or construction manager if applicable, but not by the owner until Kentucky Department of Education approval is issued.

- A **BG-1 Project Account Summary Sheet** has been provided in the Appendix for use by the district in monitoring the expenditures and available contingency related to a specific BG-number. Complete this form and submit to DFM with proposed change orders. This summary sheet is of important use when multiple contracts are included under one BG-number designation.

- After Kentucky Department of Education approval, the owner will execute and forward a copy of the change order to the Division of Facilities Management.

- Change orders submitted for construction management contracts will require an attached tabulation sheet for each bid package showing previous change orders submitted, in numerical order, with original approved contract amount and total accounting of additions or deletions to that

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contract with dates of rejection or approval by the owner and Kentucky Department of Education.

NOTE: Change orders which create an increase in the total construction contract cost exceeding the approved BG-1 construction cost plus contingency amounts, will require submittal of a revised BG-1 financial page, prior to DFM approval of any increase in contract cost.

BG-4 Submittal

- Submit to owner and schedule final inspection with owner and Kentucky Department of Education, Division of Facilities Management

- Owner signs and submits to the Kentucky Department of Education, Division of Facilities Management for approval of final payment after all punchlist and close out items have been completed.

NOTE: Unless otherwise requested, the Division of Facilities Management requires **only one copy** of all document submittals: contracts, plans, specifications, BG-forms, board orders, meeting minutes, correspondence, etc.

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Chapter Four - Suggested Document Filing System

Suggested Document Filing System

Each school board is responsible for maintaining the record file documents related to individual building projects. The following outline suggests one possible system for filing the numerous documents required. The documents must be presented if a **project audit** is conducted by the Division of Facilities Management.

I. BOARD MINUTES/ORDERS
- A. BG-1 Approvals
- B. Design Professional Contracts
- C. Schematic, Design Development, Final Plan Approvals
- D. Construction Contracts
- E. Change Orders
- F. BG-4 Final Approval & Payment Application

II. PROJECT PLANNING COMMITTEE
- A. Meeting Minutes
- B. Educational Specifications
- C. Committee Participants

III. SITE/PROPERTY
- A. Deed/Easements/Rights-of-Ways/Utilities
- B. Land & Geotechnical Surveys
- C. Survey Consultant Agreements
- D. KDE Approvals

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IV. KENTUCKY DEPARTMENT OF EDUCATION
- A. Correspondence (Approval Letters)
- B. BG Forms

V. ARCHITECT/ENGINEER
- A. RFP Process/Selection
- B. Owner/Architect Agreement
- C. Correspondence
- D. Project File for Miscellaneous items
- E. Field Reports
- F. Consultant Pay Requests

VI. FISCAL AGENT
- A. Proposals/Selection
- B. Owner/Fiscal Agent Agreement
- C. Correspondence
- D. Bond Documents

VII. BANK ACCOUNTS
- A. Depository Bank
- B. Construction Account

VIII. BIDDING
- A. Advertisement
- B. Addenda
- C. Proposals Received/Bid Tabulations

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Chapter Four - Suggested Document Filing System

IX. CONTRACTOR/CONSTRUCTION MANAGER
- A. Owner/Contractor Agreements
- B. Performance and Payment Bonds and Certificates of Insurance
- C. Project Correspondence
- D. Change Orders
- E. Progress Reports
- F. Applications for Payment
- G. Warranties
- H. Instruction Manuals

Note:

- All documents should be marked with the proper "BG" number.
- Only documents related to a specific "BG" number/project should be kept in the same project file.
- Cross-file copies of documents when necessary: e.g., a copy of the appropriate board order approving the Owner/Architect agreement should be filed with the copy of the Proposed/Executed Contract in the Contract file.

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Chapter Five - 702 KAR 4:170 Facility Programming and Construction Criteria Planning Guide

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702 KAR 4:170 Facility Programming and Construction Criteria Planning Guide

In order to completely implement the educational changes of the Kentucky Education Reform Act (KERA), and to respond to the concerns of those involved in providing instructional space, the entire process of school facility planning, design and construction has come under review. Increased community involvement of this process began with the revisions to the facility survey program in the Kentucky School Facilities Planning Manual (702 KAR 1:001). With the recent adoption of Capital Construction Process (702 KAR 4:160), the responsibilities of local school boards, architects and construction managers are given more definition. Now, a review of the existing administrative regulations covering school facility construction details and this proposed revision, Facility Programming and Construction Criteria (702 KAR 4:170), conclude the overhaul of the process.

Simultaneously, a reduction in the quantity of regulations has become a priority. 702 KAR 4:160 and 702 KAR 4:170 are consolidations of existing administrative regulations. With the adoption of 702 KAR 4:170 on March 2, 1995, three existing regulations:

* 702 KAR 4:060, Construction criteria,
* 702 KAR 4:070, Mechanical, electrical, sanitary, heating and ventilation design, and
* 702 KAR 4:080, Temporary or supplemental units,

are repealed and replaced by the programming and construction criteria document. The new administrative regulation has been reduced to the bare

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Chapter Five - 702 KAR 4:170 Facility Programming and Construction Criteria Planning Guide

essentials. In order to maintain the current minimum standards for construction and provide the desirable improvements to accommodate KERA, this administrative regulation incorporates through reference a new document, the "Facility Programming and Construction Criteria Planning Guide". This guide has several important features:

* Through the adoption of 702 KAR 4:170, the minimum areas for the program spaces identified in Kentucky School Facilities Planning Manual for planning and funding purposes, are required to be constructed at those sizes. These minimum areas include space for computers.

* The new Planning Guide lists the minimum standards for each individual instructional space. This allows the characteristics of each space to be customized in order to provide the precise learning environment. Kentucky Department of Education curriculum program consultants have provided input to bring the instructional space requirements into agreement with the current KERA curriculum needs. Most notably, this has resulted in the integration of computers and technology in the construction of instructional spaces.

* Architects and engineers experienced in school facility design were asked to review the proposed administrative regulation to provide input on the latest industry standards. Outdated provisions were discarded and new provisions reference current construction techniques.

Adoption of this administrative regulation, 702 KAR 4:170 Facility Programming

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and Construction Criteria, enhances the Kentucky Department of Education's ability to provide the local school district with a more complete guide to the physical learning environment. It will also guarantee a level of uniformity through the requirement of minimum standards for all instructional spaces across the state. Finally, it will accomplish the original objectives of completing the overhaul of the school facility construction process, and of consolidating the regulatory effort into a more usable instrument.

Notes:

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Chapter Six - Miscellaneous Questions & Answers

Miscellaneous Questions & Answers

Question: **For what type or scope of project is a BG-1 not necessary?**

Answer: 702 KAR 4:160 Section 2 identifies the conditions under which BG-1 Project Applications must be filed. In general, BG-1's are not required for "maintenance" projects using general funds. A good example of this is the replacement of a fixed building component such the roofing system, lockers or bleachers, with an equivalent component.

Question: **When must the services of an architect or engineer be secured?**

Answer: KRS 322.360 states that neither the state nor any of its political subdivisions shall engage in the construction of any public work in which the contemplated expenditure for the completed project exceeds $2000, "unless the plans, specifications and estimates have been prepared and the construction executed under the direct supervision of a registered engineer or licensed architect."

Question: **Can KDE mandate that planning include spaces for SBDM office and/or conference room?**

Answer: The Kentucky School Facilities Planning Manual adopted and incorporated by reference into 702 KAR 1:001 includes a chapter

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Chapter Six - Miscellaneous Questions & Answers

entitled "Facility Planning Process." Section D: Capital Construction Priorities and Discretionary Construction Projects (page 19), identifies Site Based Decision Making Office and Conference as one of the Category 1a KERA Strands.

Question: **If SFCC monies are not used and local building codes are met, why must KDE standards be applied?**

Answer: KRS 156.160 requires the Kentucky Board of Education to adopt rules and regulations relating to sanitary and protective construction of public school buildings, toilets, physical equipment of school grounds, and school buildings and classrooms. KRS 162.060 requires the approval of all plans and specifications for school building construction by the chief state school officer in accordance with the rules and regulations of the state board. 702 KAR 4:060 "Construction Criteria", and 4:070 "Mechanical, electrical, sanitary, heating and ventilation design" implement these statutory duties by prescribing various specifications to insure safe, functional, comfortable and economical operation of the proposed educational facility.

Question: **Can pre-engineered buildings be erected without having additional architectural review?**

Answer: KRS 323.033 stipulates that the construction of any new building,

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or the addition to any existing building, regardless of size and classified in the Kentucky Building Code as the Education use group, shall require the services of an architect licensed in the Commonwealth of Kentucky. The services of a registered engineer may be utilized in the construction of buildings of capacity less than 100 persons and classified in the utility or miscellaneous use groups.

Question: **To what extent can the ventilation, heating or electrical systems of a building be altered without the services of an architect or engineer, and approval of KDE?**

Answer: Projects for the replacement of ventilation, heating or electrical components with equivalent components, using general fund money, are classified as maintenance projects and do not require the services of architects or engineers, or KDE approval. 702 KAR 4:160 requires that any project to renovate an existing building or alter any building system (i.e., architectural, structural, mechanical, plumbing, electrical, etc.), or the utilization of "non-general fund" monies, shall require the submittal of a BG-1 Project Application. The provisions of KRS 322.360, as stated in the response above, shall apply regarding the requirement for architectural or engineering services.

Question: **Can and if so how are grant monies co-mingled with SFCC**

Notes:

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funds?

Answer: Yes, however, SFCC funds must be applied to projects on the facility plan.

Question: Is KDE moving forward in developing a means of allowing districts to contract for renovations of energy systems in a "paid from savings" arrangement?

Answer: No. In the view of the Kentucky Department of Education's legal counsel, "Paid-from-savings" programs are not legal under the current regulations.

Question: During the Local Superintendent's Advisory Committee meeting held on February 8, Kevin Noland provided a list of regulations from which school districts that had exceeded their thresholds could request exemptions. One of the regulations listed for which an exemption could be requested was restrictions on capital outlay funds. Does this mean that capital outlay funds can be spent in any way the district deems appropriate so long as it is legal?

Answer: No. Kevin Noland was discussing regulations, not state statutes.

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KRS 157.420 governs the use of capital outlay funds in accordance with the district's facility plan. Exemptions under this statute may only be requested when the facility survey shows that a district has no capital outlay needs.

Notes:

For additional information, contact DFM at (502) 564-4326 !

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Appendix

The purpose of this Appendix is to share a variety of school design and construction information, accumulated by the Division of Facilities Management throughout the course of many school construction projects. Some of this information originates in the regulations governing school facility construction, or in the Kentucky Building Code. Some of it originates in the feedback received from school administrators, teachers and maintenance personnel. Much of the information has developed into the "best practice" policy of the Division, and therefore represents generally typical details of school design in the Commonwealth of Kentucky.

In addition to the drawings and tables, there are items that are intended to be "interactive", such as the A/E Services-RFP **Firm Interview Score Sheet** and the **Plan Review Checklist**. The score sheet is provided as an aid to school administrators involved in interviewing design professionals, architects or construction managers, for an upcoming project. The checklist is provided to school administrators and design professionals as an aid in confirming that plans and specifications are complete prior to submittal. Please make copies of these for use on each project.

The Appendix will also act as a depository for future "newsletters" or memoranda entitled "**Best Practice Bulletins**", to be issued periodically and to relate to topics of immediate interest for anyone concerned with school facility construction.

Notes:

For additional information, contact DFM at (502) 564-4326 !

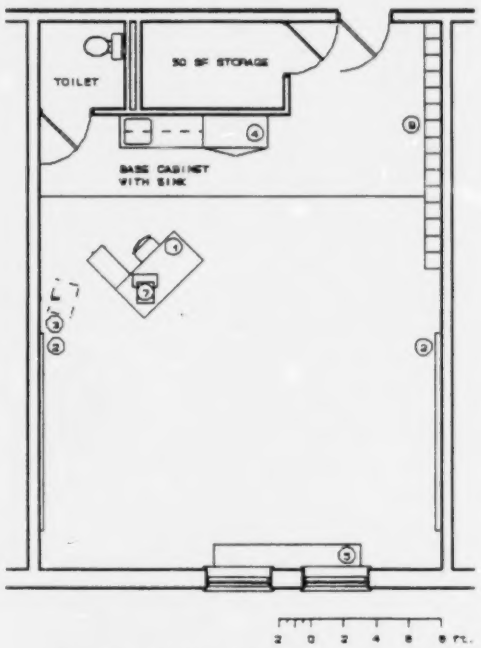
Appendix

Pre-school Classroom

This drawing depicts the typical elements of a pre-school classroom. Requirements may vary. School districts are encouraged to develop classroom plans based on the educational specifications, and through consultation with the project design professionals.

Legend:

- Standard Teacher's Desk
- Chalkboard, Tackboard or Markerboard
- Wall-mounted TV
- Teacher's storage cabinet
- Fancoil/Unit Ventilator
- Learning Center
- Computer(s)
- Printer
- Coat hooks or "cubbies"



825 sf (24'-8"x 33'-4") Pre-school Classroom for 20 Students

Notes:

For additional information, contact DFM at (502) 564-4326 !

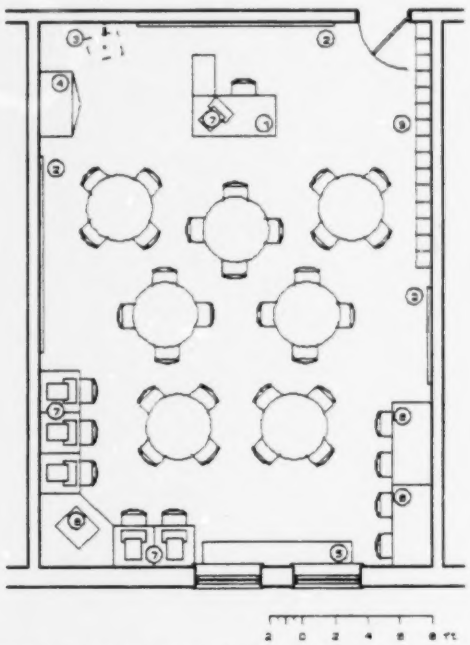
Appendix

Primary Classroom

This drawing depicts the typical elements of a primary classroom. Requirements may vary. School districts are encouraged to develop classroom plans based on the educational specifications, and through consultation with the project design professionals.

Legend:

Standard Teacher's Desk
Chalkboard, Tackboard or Markerboard
Wall-mounted TV
Teacher's storage cabinet
Fancoil/Unit Ventilator
Learning Center
Computer(s)
Printer
Coat hooks or "cubbies"



800 sf (24'x 33'-4) Classroom for 28 Students

Notes:

For additional information, contact DFM at (502) 564-4326 !

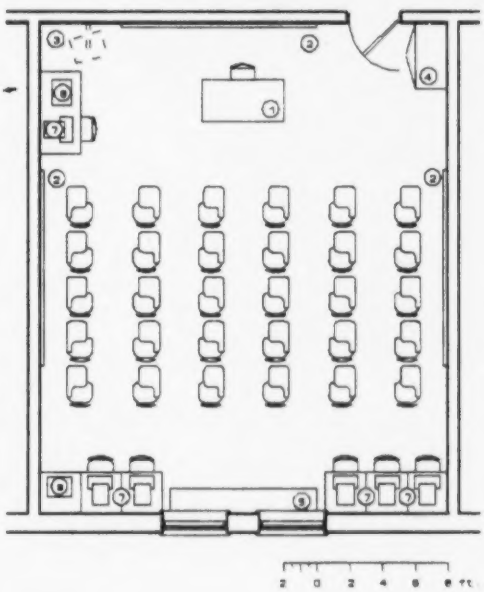
Appendix

Middle/High School Classroom

This drawing depicts the typical elements of a middle/high school classroom. Requirements may vary. School districts are encouraged to develop classroom plans based on the educational specifications, and through consultation with the project design professionals.

Legend:

Standard Teacher's Desk
Chalkboard, Tackboard or Markerboard
Wall-mounted TV
Teacher's storage cabinet
Fancoil/Unit Ventilator
Learning Center
Computer(s)
Printer



750 sf (25'x30') Classroom for 30 Students

Notes:

For additional information, contact DFM at (502) 564-4326 !

TOILET FIXTURE and ACCESSORY MOUNTING HEIGHTS

Plan Designation	Item (Dimension to)	Elementary School Children Ages 5 to 12		Middle, Junior high & High School Ages 13 to Adult	
		Standard (ES)	Handicap'd (HC)	Standard (AS)	Handicap'd (HA)
L, Lav.	Lavatories (Rim height)	30"	30"	32"	32" *
	(Apron bottom)	---	24" min. *	---	27" min. *
WC	Water Closet (Seat)	14" - 15"	15" - 17"	14" - 15"	17" - 19" *
U	Urinals (Controls)	---	32" max. *	---	40" max. *
	(Rim)	17"	15" *	24"	17"
MR	Mirrors (Top)	72"	---	80" - 84"	72"
	(Bottom)	30"	34" *	4" - 6"	36" *
GB	Grab Bars (Centerline)	---	25" - 27"	---	36" *
DF or EWC	Drinking Fountain or Electric Water Cooler (Spout)	30"	30" *	40"	36" *
PTD	Paper Towel Dispenser (Outlet)	36"	36"	54"	44"
TPH	Toilet Paper Holder (Centerline)	19"	19" *	24"	24" *
SN	Sanitary Napkin Disposal (Top)	24"	24"	24"	24"
EHD	Electric Hand Dryer (Control)	36" max.	36" max.	54" max.	48" max.
	(Nozzle)	36"	36"	54"	44"
SD	Soap Dispenser (Outlet)	36"	36"	38"	38"
Sh. Rd.	Shower Rod (Centerline)	76"	76"	76"	76"
TB	Towel Bar (Centerline)	36"	36"	48"	48"
Ct. Hk.	Coat Hook (Centerline)	36"	36"	54"	44"

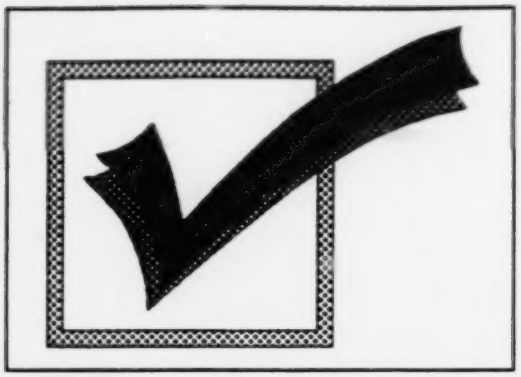
Notes:

1. Dimensions marked with an asterisk (*) are governed by the Kentucky Building Code, Article 33, particularly paragraph 3303.2 regarding Pre-school, day care and elementary school facilities.
2. Coordinate all plumbing fixtures and toilet accessories with the plumbing engineer.
3. Provide all items at Standard Adult mounting height unless plan indicated otherwise. (Example: "L-ES" indicates Elementary School Lavatory @ 30" a.f.f. GB-HA indicates Handicapped Adult Grab Bar @ 36" a.f.f.)

OPTIMUM MOUNTING HEIGHTS

Plan Designation	Item (Dimension to)	Grade Level				
		Pre-school Kindergarten	1 thru 3	4 thru 6	7 thru 9	10 thru 12
VDB-M,C,T	Visual Display Boards-Marker, Chalk, Tack (Top)	70"	73"	77"	80"	82"
	(Bottom)	22"	25"	29"	32"	34"
--	Countertop: standing position (Top)	24"	26"	30"	34"	36"
--	Desktop or tabletop: seated position (Top)	18"	20"	23"	26"	27"
--	Panic Device Door Hardware (Centerline)	27"	31"	36"	40"	42"
FEC	Fire Extinguisher Cabinet (Bottom)	32"			40"	
FE	Fire Extinguisher (Centerline of Valve)	64"			64"	
Ct. Hk.	Coat Hook (Centerline)	36"	41"	48"	54"	55"

Notes:



PLAN REVIEW CHECKLIST for SCHOOL BUILDING PROJECTS

Kentucky Department of Education
Division of Facilities Management
Construction Branch

BG # _____

PROJECT _____

SCHOOL DISTRICT _____

DATE _____

KDE PROGRAM CONSULTANT _____

The requirements of 702 KAR 4:170 Facility Programming and Construction Criteria Planning Guide, are identified throughout this Checklist with a reference to the regulation. All other items are strongly recommended as "best practices" for inclusion in the design and construction of school facilities in Kentucky.

SITE PLAN:

❑ *Separate cars from busses prior to arrival at student loading/unloading area. (702 KAR 4:170)*

❑ *Provide "Busses Only" and "No Entry" signage at appropriate ends of bus loop. (702 KAR 4:170)*

❑ *Locate curb cut and ramp adjacent to parking space for the physically disabled and at bus arrival/departure area. (702 KAR 4:170)*

❑ *Provide a dumpster area with enclosure and/or concrete-filled bollards. (702 KAR 4:170)*

❑ *Avoid excessive paving or concrete curbing.*

❑ *Check contours for adequate drainage away from building. (702 KAR 4:170)*

❑ *Locate Kitchen/Custodial employee parking at kitchen loading/unloading area.*

❑ *Locate site utilities, and physical plant components to avoid conflict with student and vehicular traffic, future growth of play areas, driveways, building expansions, etc. (702 KAR 4:170)*

❑ *Electrical service entrance lines to school buildings shall be remotely located from student traffic lanes and areas planned for outside activities. (702 KAR 4:170)*

❑ *Provide adequate site lighting for night-time hours: around building at each exterior door for security; and at all driveway intersections and bus loop for safe emergency vehicle access. (702 KAR 4:170)*

❑ *For buildings utilizing LP gas, the storage tanks shall be enclosed with a chain link fence. (702 KAR 4:170)*

❑ *A sewage treatment plant located on the school site shall be enclosed with a fence and provided with a water supply line with frostproof hydrant. (702 KAR 4:170)*

❑ *At storm sewer outlets and headwalls, utilizing pipe eight (8) inches in diameter or larger, provide steel grate guards to prevent obstructions. Rip-rap is required to prevent erosion. (702 KAR 4:170)*

❑ *Provide sub-surface drainage piping to divert roof run-off from building downspouts away from or under paved pedestrian or vehicular traffic areas. (702 KAR 4:170)*

❑ *Locate school facilities at least two hundred (200) feet away from any source of air or water contamination and high-pressure gas lines. (702 KAR 4:170)*

❑ *A geo-technical survey is required of all sites of new school facilities and of all school facility additions greater than two classrooms. (702 KAR 4:170)*

❑ *Each school facility site shall be provided with an outdoor physical education area equivalent in size and graded similar to a soccer field. (702 KAR 4:170)*

❑ *All playground equipment provided on school sites shall conform to the provisions of the "Handbook for Public Playground Safety", as published by the U.S. Consumers Products Safety Commission. (702 KAR 4:170)*

❑ *The finished floor elevation of any portion of new building or addition must be a minimum of twelve (12) inches above the 100-year flood plain. (702 KAR 4:170)*

FLOOR PLANS:

General layout:

❑ *All instructional and office spaces must be accessible to the handicapped. This includes the stage, if one exists.*

❑ *At least one handicapped stall for each sex must provided in the restrooms.*

❑ *All program spaces must meet or exceed the net areas indicated in the Facility Programming and Construction Criteria Planning Guide. (702 KAR 4:170)*

❑ *Minimum clear corridor width is: 8'-0" for elementary schools; and 9'-0" for middle, junior and high schools, excluding the depth of lockers. (702 KAR 4:170)*

❑ *A corridor serving no more than two instructional spaces is defined as a secondary corridor. The minimum clear width of a secondary corridor is 6'-0". (702 KAR 4:170)*

❑ *Corridors must terminate at an approved "means of egress", i.e., a door to the exterior or a stairway. (702 KAR 4:170)*

❑ *Classrooms may be entered from an alcove off the corridor, provided that the alcove is no larger than 8'-0" wide by 6'-0" deep. (702 KAR 4:170)*

❑ *No more than two instructional spaces may empty into a dead-end corridor or alcove. (702 KAR 4:170)*

❑ *A **FMD** classroom for special education, must be equal to the area of a standard classroom and be connected to a private restroom with a handicapped water closet, lavatory, roll-in shower and changing table. (702 KAR 4:170)*

❑ *In middle and high schools, the **FMD** classroom shall have the utilities roughed-in and capped for a unit kitchen. (702 KAR 4:170)*

❑ ***Resource rooms** shall be one half the size of a standard classroom and must have 24 square feet of chalkboard and 24 square feet of tackboard, minimum. (702 KAR 4:170)*

❑ *If two **Resource rooms** are divided by a folding partition, each room must have its own door to the corridor, its own lighting and its own source of heating and air-conditioning. (702 KAR 4:170)*
Note: It is strongly recommended to provide sound attenuation in the wall supporting the folding partition between the ceiling and structural deck above.

❑ *All doors exiting to the exterior of the building shall swing out. (702 KAR 4:170)*

❑ *Any door to the exterior must exit onto a minimum 5' x 5' concrete pad with no change in elevation from the threshold to the pad.*

❑ *Doors shall swing out: 1) at all instructional spaces where there is a chance of panic by explosion (e.g. chemistry labs, shops, etc.); and 2) at spaces with a capacity of 50 or more occupants. (702 KAR 4:170)*

❑ *Every door swinging into the corridor must swing 180°, or be recessed so as not to encroach on the clear corridor width. (702 KAR 4:170)*

Administrative Area:

❑ *Provide independent air-conditioning system.*

❑ *Provide sound attenuation throughout the administrative area with particular attention at offices and conference rooms. (702 KAR 4:170)*

❑ *Provide dedicated empty conduit for telephones and computers as a minimum in all administrative spaces. (702 KAR 4:170)*

First-Aid Room: *(702 KAR 4:170)*

❑ *Locate off the general reception area.*
❑ *Provide direct view from reception area through half-glass door or sidelight.*
❑ *Base cabinet with sink.*
❑ *Space for at least one cot.*
❑ *Connect to an accessible toilet room.*

Guidance Area:

❑ *Minimum of one guidance office for elementary schools, plus one for each 300 students for middle, junior and high schools. (702 KAR 4:170)*

❑ *Locate the guidance office or guidance suite in a manner that is accessible to a corridor without direct view to the administrative area housing either the principal or assistant principal. Provide a door*

between the administrative suite and the guidance suite if necessary for student privacy. (702 KAR 4:170)

❑ *Locate the guidance office or suite adjacent to the fireproof records storage. (702 KAR 4:170)*

❑ *When a conference room is to be provided in the administrative suite, its location should be between the guidance office/suite and the administration area. (702 KAR 4:170)*

❑ *A reception area of 150 SF is required. (702 KAR 4:170)*

❑ *Translucent (not transparent) glass view panel and/or sidelight at the guidance office door is recommended.*

Records Room:

❑ *Two-hour rated walls, ceiling and doors (B-label, 1-1/2 hour); ductwork must include fire damper. (702 KAR 4:170)*

❑ *Must be located adjacent to or within easy access of both the guidance and the general offices. (702 KAR 4:170)*

❑ *Space for the maximum number of student files: one file cabinet per 100 students. (Example: an elementary school of max. 600 students would require six file cabinets.) (702 KAR 4:170)*

General Office Area:

❑ *If only one workroom is provided for the school, it should be located here, but accessible to the corridor that teachers use. (702 KAR 4:170)*

❑ *Staff toilets should be located off of a connecting hallway into teachers' lounge or workroom. (Toilets in lounge or workroom should be visually shielded.) (702 KAR 4:170)*

❑ *Small base cabinet with sink for coffee pot and other "kitchen" items. (702 KAR 4:170)*

❑ *A second means of entry/exit out of the office for principal in junior high and high schools may be desirable.*

❑ *A bookroom located off corridor, with storage shelving, counter and rolling shutter or dutch door, for selling school supplies and other items may be desirable.*

Library/Media Center:

❑ *Centrally located to access all grade levels and areas of the building. (702 KAR 4:170)*

❑ *Library/Media Center layout should allow for maximum visual control by the librarian from the circulation desk/work area. (702 KAR 4:170)*

❑ *Full-height wall shelving on perimeter walls should handle the bulk of book collection.*

❑ *Provide space for one class in the main Library/Media Center seating area to view audio-visual presentations, with a projection screen, electrical outlets and the means to darken the space for slides or films. (702 KAR 4:170)*

❑ *A Library/Media Center is an instructional space! Windows must meet the following requirements: Sill height=30" min., 60" max.; Maximum head height=8'-8" unless approval from the Division of Facilities Management; Operable sash equal to 2% of the net floor area. (702 KAR 4:170)*

❑ *Provide electrical outlets along the perimeter walls with pigtail to base of shelving units. (702 KAR 4:170)*

❑ *Provide an area in the Library/Media Center for carrels and/or individual instruction equipment: computers, headsets, etc. (702 KAR 4:170)*

❑ *Provide switching for all light fixtures from the circulation desk, except for a switch at the entry door to operate fixtures lighting the path to the desk. (702 KAR 4:170)*

❑ *The Library/Media Center layout must include tables and chairs to seat no less than 60 students. (702 KAR 4:170)*

❑ *The main student entrance to the Library/Media Center shall be through a door opening with a pair of doors minimum 3'-0" wide per leaf. (702 KAR 4:170)*

❑ *If possible, provide glass sidelights at the Library/Media Center main entrance doors.*

❑ *Provide independent air-conditioning for extended use of the Library in all seasons. (702 KAR 4:170)*

The required Library/Media Center Support spaces (per 702 KAR 4:170) are:

❑ *Workroom and Audio-visual Storage room for an elementary school; or*

❑ *an Office/Workroom and Audio-visual Storage room for a middle, junior and high school.*
(Note: The area allotted for support spaces shall not exceed 30% of the total Library/Media Center space required.) (702 KAR 4:170)

❑ *Workroom shall have base cabinet with sink. (702 KAR 4:170)*

❑ *Provide a door between the Office/Workroom and the Audio-visual Storage Room in addition to doors into the main Library/Media Center space. (702 KAR 4:170)*

❑ *Provide view windows between the main Reading Room/stack area and the workroom/office areas for visual control by Librarian. (702 KAR 4:170)*

❑ *Entrance to the Audio-visual Storage Room should be controlled by the Librarian. Exit door to a corridor shall have "exit only" hardware. (702 KAR 4:170)*

Kitchen:

❑ *Provide one serving line for each 300 students. (702 KAR 4:170)*

❑ *Provide visual control of the delivery door, walk-in freezer/cooler and dry foods storage from the manager's office. (702 KAR 4:170)*

❑ *Provide service/delivery door annunciator with push button at door and buzzer in Kitchen with light located so as to be seen from view window in the manager's office. (702 KAR 4:170)*

❑ *Provide an exterior can wash area (or a room accessible to the outside) with hot and cold water, and a floor drain. (702 KAR 4:170)*

❑ *Non-food storage room should have space for a washer and dryer with hot and cold water, 220v electrical outlet and dryer vent, as well as shelving for non-food items. (702 KAR 4:170)*

❑ *Provide a mop receptor/sink for cleaning the floor. (Possibly in the non-food storage room). (702 KAR 4:170)*

❑ *Provide air-conditioning for the dry foods storage room to maintain proper temperatures for year-round use per federal guidelines. (702 KAR 4:170)*

❑ *Provide non-slip floor surface. (Normal vinyl tile, seamless flooring or concrete must have non-slip texture.) (702 KAR 4:170)*

❑ *Provide one staff toilet room with an entry vestibule containing staff lockers. (702 KAR 4:170)*

❑ *The Manager's office requires an enclosure with a lockable door to secure lunchroom records. (702 KAR 4:170)*

❑ *The Manager's office must be provided with telephone, computer and power outlets mounted above countertop height. (702 KAR 4:170)*

❑ *Locate the condensers for the walk-in cooler/freezer in a non-conditioned space, remote if necessary. Allow for heat dissipation into a well-vented space and easy access for maintenance. (702 KAR 4:170)*

❑ *Provide a minimum 5'-0" clear aisle space around or at the front edge of the cooking battery, and 4'-0" clear aisles at all other food preparation items/equipment. (702 KAR 4:170)*

❑ *Provide a floor drain for condensation lines at all hot and cold food units and ice makers. (702 KAR 4:170)*

❑ *Provide a floor drain under the draw-off valve at tilting skillet and steam kettle. Field locate at equipment. (702 KAR 4:170)*

❑ *Provide faucet and floor drain at vertical cutter mixer. (702 KAR 4:170)*

❑ *Provide countertops or stainless steel tables for slicers and/or microwaves. (702 KAR 4:170)*

❑ *Provide a computer outlet at each cashier's station. (702 KAR 4:170)*

❑ *Student flow to the serving line should not disrupt those already in the cafeteria. If possible, enter the serving line directly from the corridor?*

Science area:

❑ *For 5th and 6th grade 800 SF science classrooms, provide (per 702 KAR 4:170):*

- ○ *a teacher demonstration table with hot and cold water; and*
- ○ *seating at two-student tables (in place of tablet arm desks).*

❑ *Within each 1000 SF science classroom in middle, junior high or high schools, provide (per 702 KAR 4:170):*

- ○ *a separate 100 SF room for storage and preparation. (Chemical storage is prohibited here and in science classroom.)*
- ○ *a teacher demonstration table with hot and cold water;*
- ○ *doors swinging into the corridor;*
- ○ *seating at two-student tables (in place of tablet arm desks);*
- ○ *student (standing) workstations at casework located around the perimeter of the room;*
- ○ *a minimum of three sinks with cold water only;*

- ○ *one additional sink with drainboard and hot and cold water; and*
- ○ *safety cabinet, goggles, eyewash and emergency shower with floor drain and trap.*

❑ *Within each 1625 SF high school science lecture lab provide (per 702 KAR 4:170):*

- ○ *a separate 200 SF Workroom for preparation;*
- ○ *a separate 100 SF Chemical/Equipment Storage room, entered through the Workroom and ventilated per NFPA 30;*
- ○ *a teacher demonstration table with gas and hot and cold water;*
- ○ *doors swinging into the corridor;*
- ○ *seating at two-student tables (in place of tablet arm desks);*
- ○ *student (standing) workstations at casework located around the perimeter of the room;*
- ○ *a minimum of seven sinks with cold water only;*
- ○ *one additional sink with drainboard and hot and cold water; and*
- ○ *safety cabinet, goggles, eyewash and emergency shower with floor drain and trap.*

❑ *In science classrooms and lecture labs where gas is used, provide a solenoid-type emergency "kill" switch for the gas and electric service to the room. Provide a accessible valve to shut-off water service to the room. (702 KAR 4:170)*

❑ *Where chemicals are to be used provide acid waste lines in all casework, connected to a dilution pit. (702 KAR 4:170)*

❑ *A lecture lab shall have 28 stand-up work stations maximum. (702 KAR 4:170)*

Art rooms:

❑ *Locate the art room on the north side of the building with a doorway to the exterior for a future art studio. (702 KAR 4:170)*

❑ *Windows in the art room shall conform to the standard window requirements with the exception that an exemption may be approved by the Division of Facilities Management to allow the window opening to extend above the 8'-8" limit in Middle/High School Art Rooms only. (702 KAR 4:170)*

❑ *Provide lockable storage for supplies and projects. In middle, junior high and high school art Classrooms provide a separate 200 SF Art Office/Storage Room. (702 KAR 4:170)*

❑ *Provide at least one large (24"x20"x12" minimum) stainless steel sink, located at an island or peninsular casework for simultaneous use by several students. (702 KAR 4:170)*

❑ *Provide a plaster trap on all art room sinks. (702 KAR 4:170)*

❑ *A kiln shall be equipped with an exhaust hood vented directly to the outside. (702 KAR 4:170)*

Band rooms:

❑ *Locate the band room remotely from other classrooms and provide sound attenuation. (702 KAR 4:170)*

❑ *Locate the Instructor's Office at the band room entry with a view window for visual control. (702 KAR 4:170)*

❑ *Provide a small storage area in the Instructor's Office for a sheet music library. (702 KAR 4:170)*

❑ *Provide Instrument Storage in a long room with full length shelving and an entry door at one end and an exit door at the other. Each door shall be 44" wide minimum. (702 KAR 4:170)*

❑ *Provide hanging storage for band uniforms. (702 KAR 4:170)*

❑ *Risers in Chorus or Band Rooms shall not be of permanent construction. (702 KAR 4:170)*

❑ *Practice rooms, if provided, shall be constructed in metal studs and gypsum board for easy removal in the future. (702 KAR 4:170)*

❑ *Provide a separate air-conditioning system for the band room for summer use. (702 KAR 4:170)*

❑ *The minimum ceiling heights for Music Rooms shall be (per 702 KAR 4:170):*

- ○ *8'-8" for elementary school music classrooms;*
- ○ *10'-0" for middle/high school chorus rooms; and*
- ○ *12'-0" for middle/high school band/vocal and band rooms.*

Chorus rooms:

❑ *Locate the chorus room adjacent to the band room.*

❑ *Where possible, provide office and storage common with band functions.*

❑ *Provide storage for hanging choral robes. (702 KAR 4:170)*

Computer Lab:

❑ *Computer labs used for keyboarding, and other typewriting and word processing skills, shall have a maximum of 28 work stations.*

❑ *Provide 48 SF of marker board in the computer lab, in place of chalkboard. (702 KAR 4:170)*

❑ *Locate all power and data outlets for computers per the KETS "Building Wiring Standards": at student stations 34" to 48" AFF; at staff and teacher stations 18" AFF. (702 KAR 4:170) Connections flush with the floor or countertop are not allowed.*

Gymnasiums:

❑ *The minimum clearance between the "in-bounds" line of the basketball court and any wall or obstruction adjacent to the court shall be 6'-0" along the sides and 8'-0" at each end. (702 KAR 4:170)*

❑ *The unobstructed clearance above the basketball court shall be: 20'-0" for an elementary school gym; 22'-0" for a middle school gym; and 24'-0" for a high school gym. (702 KAR 4:170)* **Reminder:** *Locate all roof structural members so that it is impossible to climb on them from the top row of bleacher seats.*

❑ *Provide a coach/instructor's office with a private toilet and shower. (702 KAR 4:170)*

❑ *Provide bleacher seating for the entire student body for non-athletic functions and assemblies. (702 KAR 4:170)*

❑ *Provide bullnose masonry units at all corners inside the gym. (702 KAR 4:170)*

❑ *Provide acoustical materials at walls and ceilings to reduce noise for non-athletic functions. (702 KAR 4:170)* **Reminder:** *Give special consideration to public address systems applicable to gymnasium environment.*

❑ *Provide a P.E. Storage room of at least 300 SF. (702 KAR 4:170)*

❑ *Inserts in wood gymnasium floors for volleyball standards, electrical or public address system outlets are prohibited. "(702 KAR 4:170)*

❑ *Provide impact protective cages on all thermostats, alarms, switches, etc. (702 KAR 4:170)*

❑ *Shower and locker rooms for each sex shall be provided for grades 7 and above. (702 KAR 4:170)*

❑ *Provide quartz re-strike switching on four light fixtures for immediate illumination. (702 KAR 4:170)*

❑ *Shower and toilet rooms shall have keyed-operated light switches remote from wet areas. (702 KAR 4:170)*

STRUCTURAL DRAWINGS:

❑ *Roof framing must slope 1/4" per foot minimum for positive drainage; tapered insulation is not acceptable as the only means of positive slope. (702 KAR 4:170)*

ELEVATION DRAWINGS:

❑ *The height of a window sash or frame shall be a minimum of 30" above the finished floor. (702 KAR 4:170)*

❑ *Windows in instructional spaces shall have: a minimum total area of 36 SF; and operable sashes equal to 2% of the net floor area. (702 KAR 4:170)*

❑ *Clerestories and skylights shall be prohibited in all instructional spaces, with the exception of Art and Biology classrooms where approval of the Division of Facilities Management is required. (702 KAR 4:170)*

❑ *Window glass openings above 8'-8" AFF are prohibited in all instructional spaces with the exception of the Library/Media Center and Middle/High School Art Classrooms where approval of the Division of Facilities Management is required. (702 KAR 4:170)*

❑ *Glass block is prohibited in all instructional spaces except the Library/Media Center where approval of the Division of Facilities Management is required. (702 KAR 4:170)*

❑ *Check elevation drawings where canopies are required over exits. (702 KAR 4:170)*

SECTION DRAWINGS:

❑ *Check sections to confirm the 8'-8" minimum ceiling heights in areas not covered in the Room Finish Schedule. (702 KAR 4:170)*

❑ *Confirm 30" minimum window sill height. (702 KAR 4:170)*

ROOF PLAN:

❑ *Access to major rooftop mechanical equipment must be provided through a roof hatch via a ship's*

ladder. (702 KAR 4:170) A ship's ladder is defined here to have a pitch between 60 and 75 degrees from the horizontal, with flat treads and a handrail separate from the side rails. A "safety post" extension device is recommended at all roof hatches.

❑ *Provide protective roof walkboards from roof hatch to, and around each piece of rooftop mechanical equipment.*

ROOM FINISH SCHEDULE:

❑ *Check this schedule to verify that kitchen, toilet, shower/locker or other areas requiring special flooring are provided with non-slip, waterproof,hard finish with matching base.*

❑ *Confirm 8'-8" minimum ceiling heights in all spaces, except 8'-0" in corridors and 10'-0" in Library/Media Centers and Cafeterias. See gyms and music rooms for respective ceiling heights. (702 KAR 170)*

DOOR SCHEDULE:

❑ *Confirm that no door, or single leaf of a pair of doors is less than 2'-10". (702 KAR 4:170)*

❑ *Confirm that doors to any instructional space are a minimum of 3'-0" wide by 6'-8" high. (702 KAR 4:170)*

❑ *Door to* **Records Room** *shall be a minimum B-label, 1-1/2 hour fire-rated door. (702 KAR 4:170)*

❑ *Confirm that door to* **First-Aid Room** *has half glass view panel. (702 KAR 4:170)*

❑ *Doors into* **Pre-school Classrooms** *shall have a glass view panel 6" wide, from 6" above the floor to within 5" of the top of the door. (702 KAR 4:170)*

ENLARGED LAYOUTS:

❑ *Check 1/4"=1'-0" plans for compliance with the provisions of 702 KAR 4:170 and the KDE consultant review comments. Deviation from the regulation or the comments will require a written explanation from the superintendent and approval of the Division of Facilities Management.*

SITE UTILITY PLAN:

❑ *Check the location of the sewage treatment plant, sewer lines and manholes in relation to the building and the site. Locate the treatment plant remote from all developed areas and provide natural or artificial screening. (702 KAR 4:170)*

❑ *A sewage treatment plant on the site will require an enclosure fence and a water line with frostproof hydrant. (702 KAR 4:170)*

❑ *Where chemicals are utilized in science lecture/labs, verify the provision of an acid dilution pit. (702 KAR 4:170)*

❑ *Verify the provision of a grease trap outside the kitchen. (702 KAR 4:170)*

❑ *Verify the proper location of water service lines and easy access to valve controls.*

❑ *Check this plan for the electrical service entry and the transformer locations with respect to the student traffic, future growth of play areas, driveways, building expansions, etc. (702 KAR 4:170, 2.1)*

❑ *Check this plan for adequate site lighting. (702 KAR 4:170)*

❑ *For buildings utilizing LP gas, the storage tanks must be enclosed with a chain link fence. (702 KAR 4:170)*

❑ *If the building uses natural gas, check the location of the incoming service lines. Where lines cross under driveways, verify that they are either deep enough or that they are properly encased within a ventilated tube.*

❑ *Where LP gas is provided in bottled form for use in the chemistry/physics labs, verify that the bottle is properly strapped to the exterior of the building.*

❑ *Check this plan for storm sewer outlets and headwalls. Verify rip-rap is provided as required to prevent erosion. (702 KAR 4:170)*

PLUMBING PLANS:

❑ *Check the plumbing plan for a key-operated hose bibb (18" above the floor) at each restroom containing more than one water closet. (702 KAR 4:170)*

❑ *Check this plan for the provision of at least two frost-proof hose bibbs. One should be located near the front entry. (702 KAR 4:170)*

❑ *Hot and cold water hydrants and a drain are required at the can wash outside the Kitchen. (702 KAR 4:170)*

❑ *In tile floors, provide square or rectangular floor drains.*

❑ *In middle, junior or high school training rooms, provide a floor drain and cold water connection for a whirlpool. Locate to allow access to whirlpool from three sides. (702 KAR 4:170)*

❑ *Provide a floor drain for condensate drainage from all hot or cold food service equipment items in the Kitchen (e.g. the walk-in cooler/freezer, ice-makers, etc.). (702 KAR 4:170)*

❑ *A custodial floor mop sink and shelving shall be provided, in a custodial workroom, on each floor level of the building. (702 KAR 4:170)*

MECHANICAL PLANS:

❑ *The mechanical room shall be planned to permit repair and replacement of equipment, satisfactory cleaning and care, and provide for combustion air. (702 KAR 4:170)*

❑ *The mechanical equipment shall be remote from the instructional areas and shall be sufficiently sound-proofed so that its operation will not disturb instruction in the classrooms. (702 KAR 4:170)*

❑ *Plans for new construction and renovation shall provide that the boiler and its related equipment shall not be located directly over, under or adjacent to an instructional area. (702 KAR 4:170)*

❑ *Mechanical heating, ventilating and air-conditioning shall be provided in all new schools and in additions to existing schools. An exemption may be granted from air-conditioning mechanical rooms, shop areas, storage rooms and shower/locker rooms. (702 KAR 4:170)*

❑ *Mechanical systems shall be provided with accessible filters and individual room temperature control. Air shall be introduced in such a manner as not to produce drafts. (702 KAR 4:170)*

❑ *All instructional spaces shall have individual thermostatic control. (702 KAR 4:170)*

❑ *All janitor's closets are to be mechanically exhausted. (702 KAR 4:170)*

❑ *Access to mechanical mezzanine or penthouse shall be via stairs or ship's ladder (see definition Roof Plans). (702 KAR 4:170)*

❑ *Provide tamper-proof thermostats or lockable covers on all thermostats in public areas and instructional spaces. (702 KAR 4:170)*

❑ *"Gang" toilet rooms, shower rooms and locker rooms in a school building shall be mechanically exhausted. Exhaust registers shall be located at or in the ceiling of each shower room and drying area and exhausted directly to the outside. (702 KAR 4:170)*

❑ *Exhaust ducts serving rooms for opposite sexes shall not be connected to a common exhaust duct unless adequate sound proofing is provided. (702 KAR 4:170)*

ELECTRICAL PLANS:

❑ *In each classroom provide (per 702 KAR 4:170):*
- ○ *a minimum of two duplex convenience outlets;*
- ○ *one duplex outlet and one computer outlet at each computer station; and*
- ○ *for ETV power supply, one duplex outlet located between 48" and 60" AFF, at the end of the visual display board opposite the door.*

❑ *A minimum of one duplex outlet is required in each habitable space. (702 KAR 4:170)*

❑ *Each corridor shall be provided with grounded convenience outlets of such capacity and at such intervals to accommodate floor cleaning machines in corridors and classrooms. (702 KAR 4:170)*

❑ *Provide surge protection at all computer, telephone and video equipment items. (702 KAR 4:170)*

❑ *Provide telephone and computer power and data outlets for each office space. (702 KAR 4:170)*

❑ *Provide a duplex outlet at each drinking fountain location. (702 KAR 4:170)*

❑ *Shower and toilet rooms shall have keyed-operated light switches remote from wet areas. (702 KAR 4:170) Note: Shower room lights should be switched with locker room lights.*

❑ *In athletic training rooms where a whirlpool will be installed, a GFI outlet with a remote switch is*

required for power to the whirlpool. Locate the remote switch in the coach's office, or under lockable cover, a minimum distance of 6'0" from the whirlpool. (702 KAR 4:170)

❑ *Verify that the library light switching is as described previously in the* ***Library*** *section of this checklist.*

❑ *Verify that ETV outlets have been provided in all instructional spaces including special education, library, gymnasium, music room, art room, band room, and cafeteria. (702 KAR 4:170)*

❑ *ETV head-end equipment should be located in the library Audio-Visual Storage, or its equivalent, with appropriate means to distribute video presentations throughout the building. (702 KAR 4:170)*

❑ *Classroom lighting to produce 50 footcandles (per 702 KAR 4:170) at desktop height should be arranged in a uniform pattern. This is equivalent to 9 or 10 four-lamp 2'x4' fluorescent fixtures.*

❑ *Verify a weatherproof power outlet at each main exit. (702 KAR 4:170)*

❑ *Gymnasium lighting control shall have key-operated switch or shall be under lockable cover. (702 KAR 4:170)*

❑ *In the Gymnasium, provide quartz re-strike switching on four light fixtures for immediate illumination. (702 KAR 4:170)*

❑ *Verify that the plan provides for the computer network* ***Distribution Frame*** *rooms called for in 702 KAR 4:170.*

FINAL PLANS and SPECIFICATIONS:

The plans and specifications submitted to the Division of Facilities Management for final review shall include the following items:

❑ *"Wet" seal and signature on the front cover of both plans and specifications. (702 KAR 4:160)*

❑ *Advertisement or Invitation to Bid including the date and time for the receipt of bids.*

❑ *The bid documents required by 702 KAR 4:160:*
- ○ *AIA A701 Instructions to Bidders with the KDE Amendment;*
- ○ *Supplementary Instructions to Bidders including deletion of Article 10-Public Works Act when not applicable;*
- ○ *the KDE Form of Proposal with attachments if necessary;*
- ○ *AIA A101 Owner-Contractor Agreement with the KDE Amendment;*
- ○ *AIA A201 General Conditions with the KDE Amendment; and*
- ○ *AIA A312 Performance and Payment Bond with the KDE Amendment.*

❑ *For projects utilizing construction management provide the "CMa" version of the AIA documents listed above.*

❑ *For projects utilizing construction management provide the following items in addition to those listed above:*
- ○ *a Project Schedule of milestone dates;*
- ○ *a list of Bid Packages identifying the scope of work for each prime contractor and the "breakout" items to be direct purchased by the Owner.*
- ○ *a section entitled "Language Specific to Bids" detailing topics such as the definition of material supplier versus contractor, and the provisions of the Kentucky Sales and Use Tax;*
- ○ *a Sample Purchase Order similar to the form to be used by the Owner to purchase the "breakout" items; and*
- ○ *a copy of the Material Supplier Authorization per 702 KAR 4:160.*

❑ *Division 1 of the specifications shall include sections covering the following topics:*
- ○ *a Summary of the Work; and*
- ○ *a list of Alternates coordinated with the drawings.*

❑ *The Technical Specifications shall include:*
- ○ *sections covering the applicable Construction Specialties Institute divisions 2 through 16;*
- ○ *material or equipment specifications listing at least three acceptable manufacturers or containing "or equal" clauses;*
- ○ *roofing specifications with an unconditional two-year installer's warranty (in addition to the manufacturer's warranty) for all roofing systems to be used on the project, per 702 KAR 4:170;*
- ○ *a Door Hardware section with a schedule of hardware sets; and*
- ○ *the specifications for the KETS network cabling if it is to be installed in this project.*

❑ *If not submitted previously or provided loose, the bound project manual shall include a copy of the Geotechnical Survey required by 702 KAR 4:170.*

❑ *Submit all other documents to DFM required by KDE and 702 KAR 4:160 prior to issuance of the authorization to advertise for bids.*

FIRM INTERVIEW SCORE SHEET

PROJECT NAME: _____ **FIRM NAME:** _____

DISTRICT: _____ **DATE:** _____

	FIRM QUALIFICATIONS (Rate the responses to the questions in italics from 0, to 10 for the most favorable.)	INTERVIEW POINTS
1.	Past Experience in Kentucky School Facility Construction *"Summarize your firm's most successful school projects."*	
2.	Knowledge of 702 KAR 4:160 Capital Construction Process *"How many of this firm's previous school projects were completed under the provisions of 702 KAR 4:160?"*	
3.	Proximity to District and Project Site *"Identify your firm's activities within 30 miles of the proposed project site?"*	
4.	Current Firm Workload *"How large is the proposed project relative to the total value of all construction work in which this firm is currently involved."*	
5.	Current Project Staff/Sub-consultant Assignments *"Introduce the individuals who will be responsible for this project."*	
6.	Basic Pre-Bid Design/Document Services *"Summarize your firm's approach to providing these services."*	
7.	Schedule Control *"How does this firm maintain control of the project schedule? Is the RFP-proposed schedule feasible?"*	
8.	Budget Control *"How does this firm maintain control of the project budget? Is the RFP-proposed budget feasible?"*	
9.	Construction Phase Services *"Identify the personnel to be involved during construction? Qualifications?"*	
10.	Change Order Control *"How does this firm minimize change orders during construction?"*	
	TOTAL POINTS (Possible 100 Points Maximum)	
	REFERENCES Add or deduct points based on the information received from the references provided by the firm being interviewed.	
	PAST PERFORMANCE Add or deduct points for this firm's performance on previous projects for this district.	
	GRAND TOTAL POINTS	

Evaluator: _____

KENTUCKY DEPARTMENT OF EDUCATION
Division of Facilities Management

BG-1 Project
Account Summary Sheet

This BG-1 Project Account Summary Sheet shall be submitted by the District with each change order or additional expenditure from the project account during the Construction Phase. Complete the following:

District: _____ BG # _____

Facility: _____ Project Name: _____

Enter the **"Total Estimated Cost"** from the current approved BG-1:

Revise the values shown for the "Statement of Probable Cost" (IIA, page 3) on the BG-1 Project Application by identifying the **Actual Cost** incurred through today's date.

		BG-1 Value	Actual Cost
1.	Total Construction Cost (Include all contracts, direct-purchase materials, change orders, etc.)		
2.	Architect/Engineer Fees		
3.	Construction Manager Fee		
4.	Bond Discount		
5.	Fiscal Agent Fee		
6.	Contingencies (5% Minimum)		(See line 13 for the **Available Contingency**)
7.	Site Acquisition		
8.	Equipment/Furnishings		
9.	Equipment/Computers		
10.	Technology Network Systems (KETS)		
11.	Other (Describe)		
	a. Surveys		
	b. Asbestos Abatement		
	c. Tank Removal		
	d.		

12. Enter the total of **Actual Cost** lines 1 through 11d (excluding line 6):

13. Subtract line 12 from the "Total Estimated Cost" above, and enter the amount here. This is the **Available Contingency** for use on this project. If line 12 exceeds the "Total Estimated Cost", revise the BG-1 and submit to the DFM with a board order.

_____ _____

Signature of the Superintendent or Board Designee Date

Appendix

Best Practice Bulletins

The *Best Practice Bulletins* are intended to be the "newsletter" of the Division of Facilities Management. Periodically, memoranda related to topics of immediate interest to anyone concerned with school facility construction will be issued by the Division. The *Bulletins* will be numbered and dated. Please collect these in this part of the Appendix for future reference.

Notes:

For additional information, contact DFM at (502) 564-4326 !

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